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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,723

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EXAMINER

PERRY, ANTHONY T

ART UNIT

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2879

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/561,723	<b>Applicant(s)</b> NAKATERA ET AL.	
	<b>Examiner</b> ANTHONY T. PERRY	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/20/05</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Murai et al. (US 2001/0026119).

Regarding claim 1, Murai et al. disclose a cathode ray tube comprising: a glass bulb that is formed by joining a substantially rectangular panel (10) with a funnel (15) that houses an electron gun (25) in a neck (20) thereof; and an internal magnetic shield (30,50) that is substantially in a shape of a hollow truncated pyramid which is rectangular in a cross section, the internal magnetic shield being housed in the glass bulb such that a small diameter opening (63) of the internal magnetic shield (30,50) faces toward the electron gun (25), wherein in the internal magnetic shield, a first short edge (62) and a second short edge (62) are arranged to face each other across the small diameter opening, and each short edge is in a shape of a valley that drops toward the panel (10) over an entire length thereof, and a first long edge (61) and a second long edge (61) are arranged to face each other across the small diameter opening (63), and each long edge is in a shape of a mountain that rises toward the electron gun (25) over an entire length thereof (for example, see paragraph 0088 and Figs. 1, 6A, and 10).

Regarding claim 2, Murai et al. teach the internal magnetic shield is structured such that in terms of a height of the internal magnetic shield from a plane that is perpendicular to a tube axis of the cathode ray tube and includes a point at an intersection of an inner surface of the panel with the tube axis, tops of the long edges (63) in the shape of the mountain have a largest height, points where long edges (63) meet short edges (62) have a smaller height than the tops of the long edges (63), and bottoms of the short edges (62) in the shape of the valley have a smaller height than the points where the long edges (63) meet the short edges (62) (for example, see Fig. 6A).

Regarding claim 3, Murai et al. disclose the cathode ray tube of Claim 2, wherein at a rim of the small diameter opening (63), the height of the internal magnetic shield from the plane decreases gradually from the tops of the long edges (61) to the bottoms of the short edges (62) (for example, see Fig. 6A).

Regarding claim 4, Murai et al. teach the shape of the valley is symmetrical on either side of a center of each of the first and second short edges (62), and the shape of the mountain is symmetrical on either edge of a center of each of the first and second long edges (61) (for example, see Fig. 6A).

Regarding claim 5, Murai et al. show each short edge (62) is continuous to each long edge (61) at each end thereof (for example, see Fig. 6A).

Regarding claim 6, Murai et al. show each of the first and second short edges (62) is in a shape of an inverted trapezoid, a character "U", a character "V", or an arc as the shape of the

valley, and each of the first and second long edges (61) is in a shape of an obtuse-angled isosceles triangle as the shape of the mountain (for example, see Figs. 6A and 10).

Regarding claim 8, Murai et al. teach the cathode ray tube of Claim 1 further comprising: a rectangular frame (42 + 41) that supports the internal magnetic shield (30) at an end of the internal magnetic shield where a large diameter opening is formed; and a tension mask (Ma) that is supported by the rectangular frame (42 + 41), wherein a phosphor screen (11), which is composed of red, green, and blue phosphors that are arranged to form vertical stripes, is formed on the inner surface of the panel (for example, see Figs. 1-2).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murai et al. (US 2001/0026119) in view of JP 2003-187717).

Regarding claim 7, Murai et al. disclose the cathode ray tube of Claim 1, wherein a first long edge plate including the first long edge (61) and a second long edge plate including the second long edge (61) are arranged to face each other, and a first short edge plate including the first short edge (62) and a second short edge plate including the second short edge (62) are arranged to face each other, so that the internal magnetic shield is substantially in the shape of the hollow truncated pyramid (for example see Fig. 6A).

Murai et al. do not specifically recite a slit extending from a center of each of the first and second long edges toward the panel. However, JP 2003-187717 teaches an internal magnetic shield having a slit (16) extending from the center of each of the long edges (for example, see Fig. 11). The reference teaches that the slit allows for better beam control and a more accurate scanning line (for example, see paragraphs 0058-0060). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a slit extending from a center of the long edges of the internal magnetic shield of the Murai reference in order to provide a more accurate display.

#### ***Other Prior Art Cited***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure includes:

Matsuki et al. (US 4,229,675), Iwamoto et al. (US 6,768,253), and Kim et al. (US 2002/0171350) teach internal magnetic shields that have long edges and short edges having mountain-like and valley-like shapes.

#### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anthony Perry/

Anthony Perry  
Patent Examiner  
Art Unit 2879  
June 22, 2008

/Nimeshkumar Patel/  
Supervisory Patent Examiner, Art Unit 2879